**Amendments to the Claims**

Please amend claims 1, 2, 5, 6, 8-18, and 60 as indicated in the listing of claims.

Please cancel claim 3, without prejudice or disclaimer.

The listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A method for localizing a probe within a cell, comprising:

a) contacting a sample comprising a cell expressing a membrane bound single chain antibody with a membrane permeant probe/ligand conjugate, ~~said~~ the probe/ligand conjugate comprising:

i) a probe moiety,

ii) a ligand that can bind with ~~said~~ the single chain antibody, and

iii) a linker moiety coupling ~~said~~ the probe to ~~said~~ the ligand; and

b) detecting the probe/ligand conjugate within the cell, thereby localizing the probe within the cell.

2. (Currently Amended): The method of claim 1, wherein ~~said~~ the probe is a spectroscopic probe.

Claims 3-4 (Canceled)

5. (Currently Amended): The method of claim 2, wherein ~~said~~ the single chain antibody has at least 30% sequence identity to SEQ.ID.No. 1 and ~~is capable of recognizing~~ binds phOx.

6. (Currently Amended) The method of claim 2, wherein ~~said~~ the single chain antibody is a homologue of SEQ.ID.No. 1 and ~~is capable of recognizing~~ binds phOx.

7. (Canceled)

8. (Currently Amended) The method of claim 2, wherein ~~said~~ the single chain antibody comprises a fusion protein.

9. (Currently Amended) The method of claim 3, wherein ~~said~~ the detecting comprises NMR imaging.

10. (Currently Amended) The method of claim 3, wherein ~~said~~ the detecting comprises positron emission tomography.

11. (Currently Amended) The method of claim 3, wherein ~~said~~ the detecting comprises locating ~~said~~ the fluorescence characteristic of ~~said~~ the fluorescent moiety within ~~said~~ the cell.

12. (Currently Amended) The method of claim 3, wherein ~~said~~ the detecting comprises fluorescence activated cell sorting.

13. (Currently Amended) The method of claim 3, wherein ~~said~~ the cell is an eukaryotic cell.

14. (Currently Amended) The method of claim 3, wherein ~~said~~ the cell is a mammalian cell.

15. (Currently Amended) The method of claim 3, further comprising the steps of,

i) adding a stimulus to ~~said~~ the cell and

ii) detecting ~~said~~ the probe/ligand conjugate, before and at least one time after addition of ~~said~~ the stimulus.

16. (Currently Amended) The method of claim 3, wherein ~~said~~ the detecting comprises detecting at least one optical property of ~~said~~ the spectroscopic probe.

17. (Currently Amended) The method of claim 16, wherein ~~said~~ the optical property is fluorescence emission.

18. (Currently Amended) The method of claim 16, wherein ~~said~~ the optical property is fluorescence anisotropy.

Claims 19-59 (Canceled)

60. (Currently Amended) A method for localizing a probe, comprising:

a) contacting a sample comprising a cell expressing a specific binding partner with a probe/ligand conjugate, ~~said~~ the probe/ligand conjugate comprising:

i) a probe moiety,

ii) a ligand that can bind with ~~said~~ the specific binding partner, and

iii) a linker moiety coupling ~~said~~ the probe to ~~said~~ the ligand,

wherein ~~said~~ the ligand and ~~said~~ the specific binding partner bind non-covalently, wherein ~~said~~ the probe/ligand conjugate is membrane permeant, and wherein the specific binding partner is expressed from a recombinant nucleic acid.

Claims 61-62 (Canceled)

63. (Previously Presented) The method according to claim 60 wherein the specific binding partner is a single chain antibody.

64. (Previously Presented) The method of claim 1, wherein the probe provides a more intense signal when the probe/ligand conjugate is bound to the single chain antibody than when it is unbound.

65. (Previously Presented) The method of claim 2, wherein the probe provides a more intense signal when the probe/ligand conjugate is bound to the single chain antibody than when is unbound.

Claims 66-74 (Canceled)

75. (New) The method of claim 1, wherein the single chain antibody is bound to a Golgi apparatus membrane or an endoplasmic reticulum membrane.

76. (New) The method of claim 1, wherein the ligand comprises an epitope of phOx, hemagglutinin, Poly His, V5, or myc.

77. (New) The method of claim 1, wherein the single-chain antibody comprises SEQ ID NO:1.

78. (New) The method of claim 77, wherein the linker comprises diaminopentane.

79. (New) The method of claim 1, wherein the cell is a living cell.

80. (New) The method of claim 1, wherein the probe is a pH sensitive fluorescent probe.